







- 1. OECs
  2. HMVECs-c
  3. OFT-ECs 10 weeks
  4. OFT-ECs 20 weeks
  5. Isl1+ progenitors (D7)
  6. Isl1-ECs (D14)
  7. Isl1-ECs (D28)

**Supplementary information, Figure S4** Expression of endothelial progenitor, endocardial and cardiac progenitor genes by endothelial cells derived from the human Isl1<sup>+</sup> progenitors.

(A-D) qPCR data showing expression levels of (A) endothelial progenitor genes, (B) endocardial genes, and (C, D) cardiac progenitor genes in human OECS, HMVECs-c, CD144<sup>+</sup>CD31<sup>+</sup> ECs derived from the outflow tract of human fetal heart (OFT-ECs) at 10 or 20 weeks of gestation, day-7 human Isl1-cre eGFP<sup>+</sup> cells (Isl1<sup>+</sup> progenitors) or CD144<sup>+</sup>CD31<sup>+</sup> ECs derived from day-7 human Isl1-cre eGFP<sup>+</sup> cells (Isl1-ECs) in the presence of VEGF-A for 7 (D14) or 14 days (D28). Expression levels were compared to that of the hESCs or hESC-derived cardiomyocytes (value on y-axis = 1), \*P<0.05, \*\*P<0.01 and \*\*\*P<0.005.